

Fig. 1 Scheme of the random assembling of polyepitope genes with
EALI

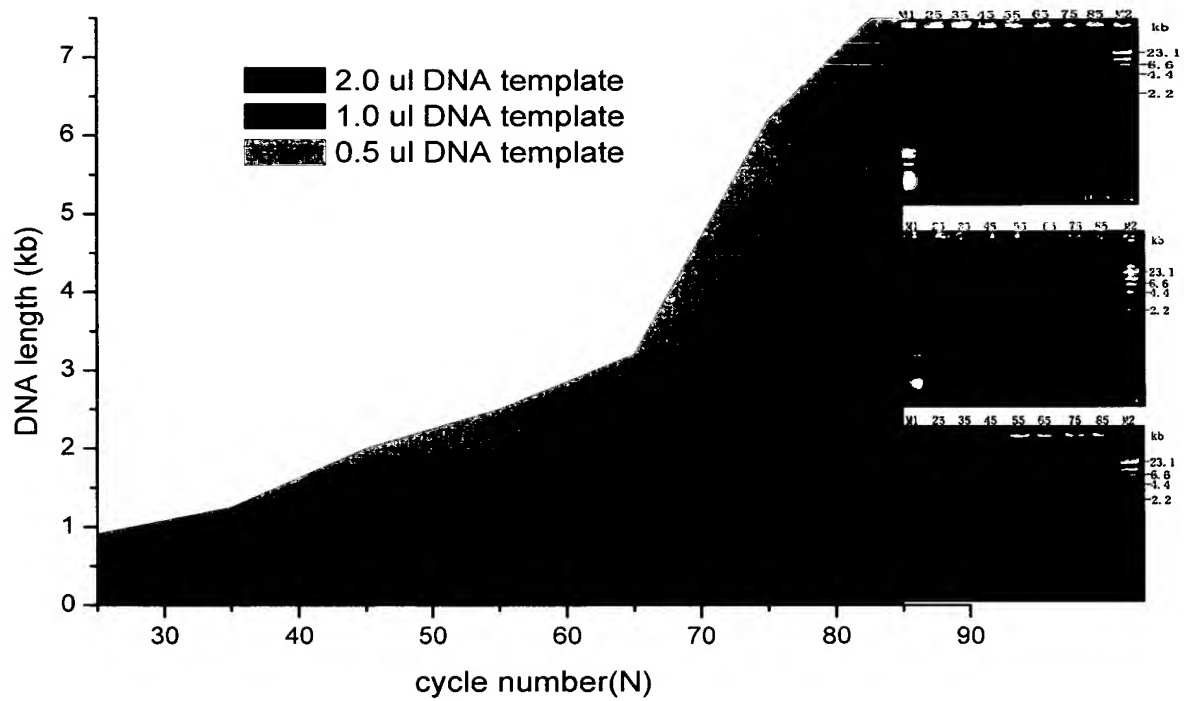


Fig. 2 Graph of polyepitope genes randomly constructed by using a primer-free polymerase chain reaction under different conditions

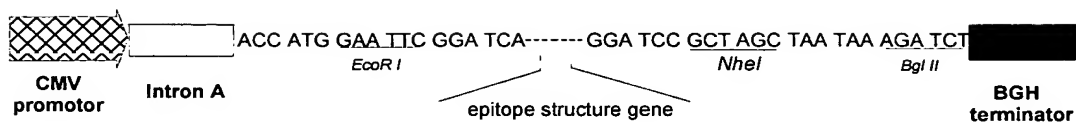


Fig. 3 Gene structure of a polyepitope gene vaccine in an eukaryotic expression vector

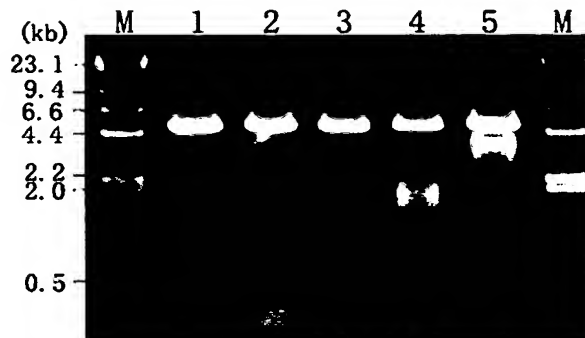
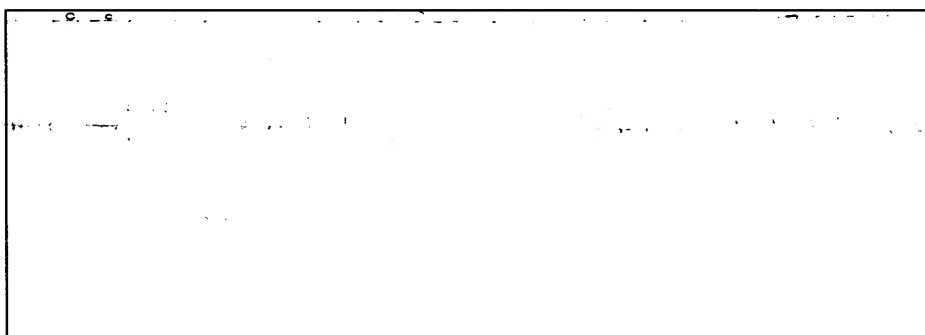


Figure 4 Gene lengths in different polyepitope chimeric gene libraries

A



B

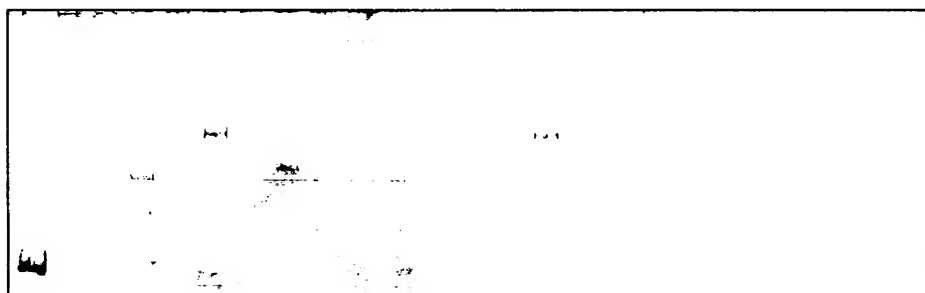


Figure 5 PCR-SSCP assay for the gene diversity of polyepitope chimeric
gene libraries with different lengths

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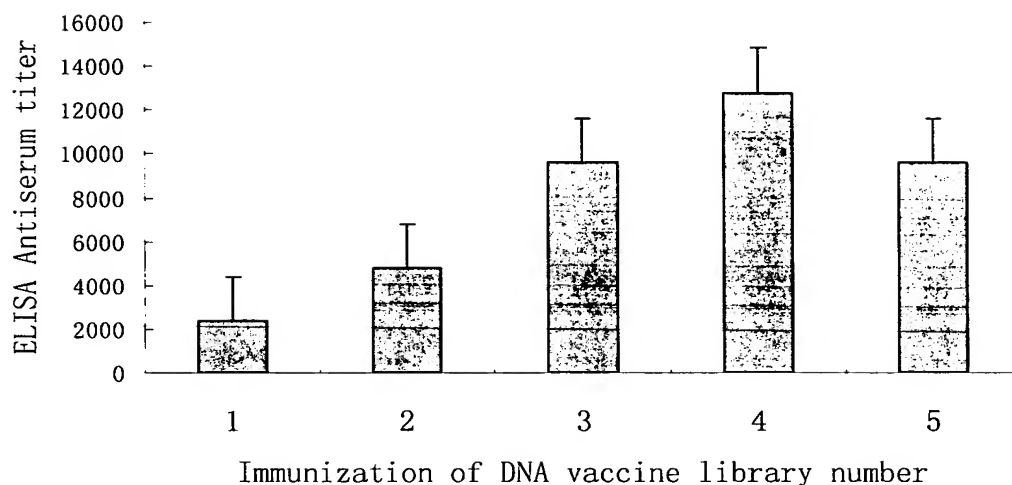


Figure 6 Antibody levels generated by the epitope gene libraries with different lengths

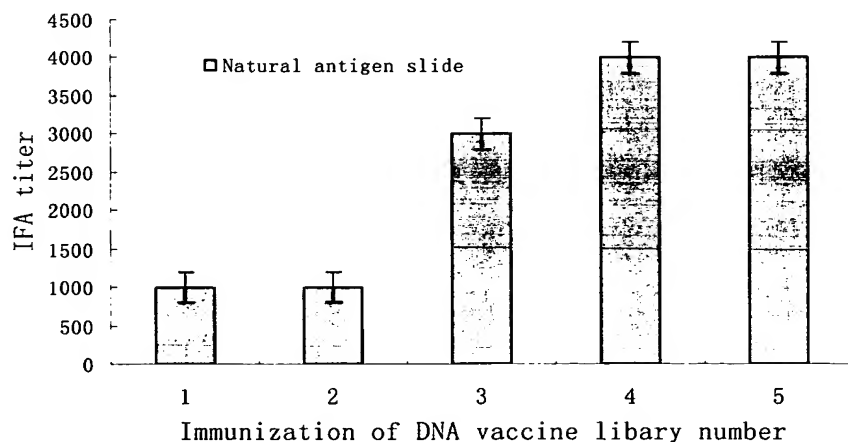
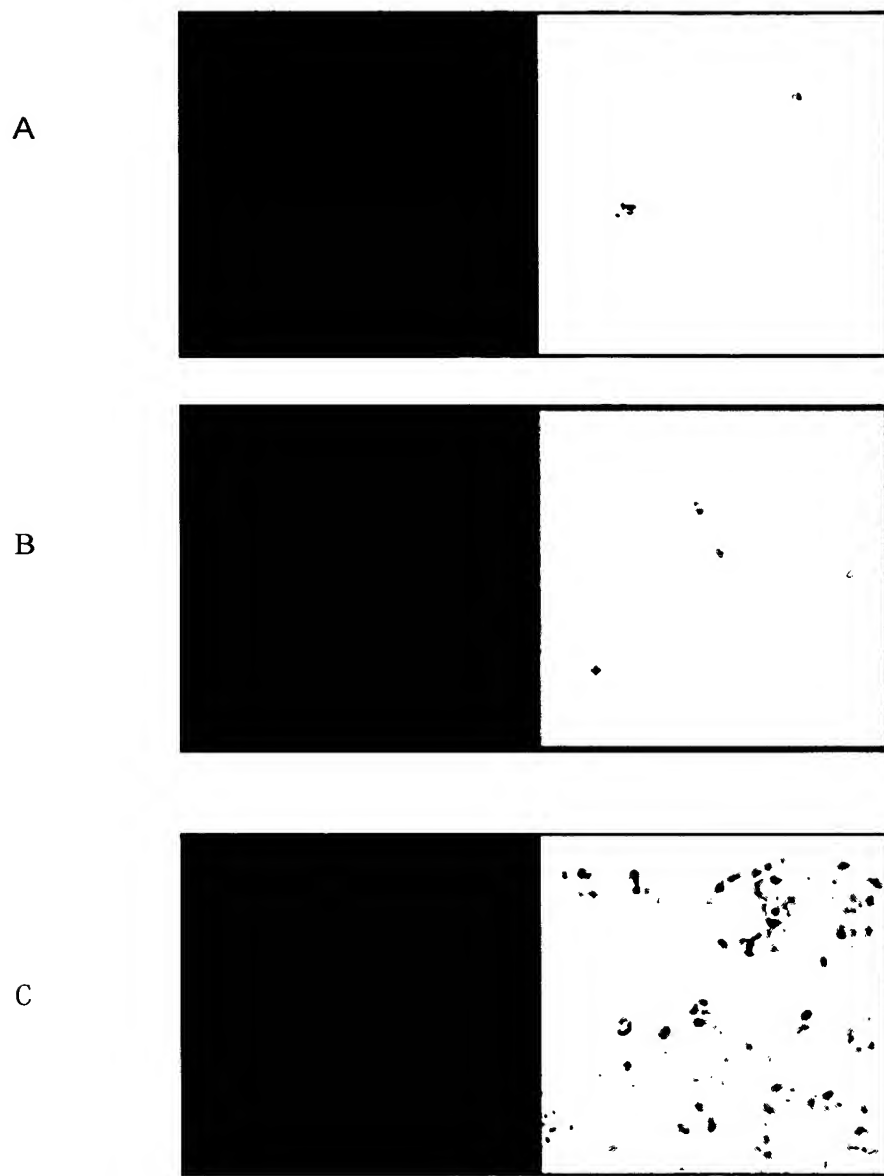


Figure 7 Recognition of native parasite antigens by dilutions of the antibodies generated by polypeptide gene libraries with different lengths



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Figure 8 Confocal microscopy results showing the recognition of different native antigens of plasmodium by antibodies generated by polypeptide gene vaccines in No.4 library

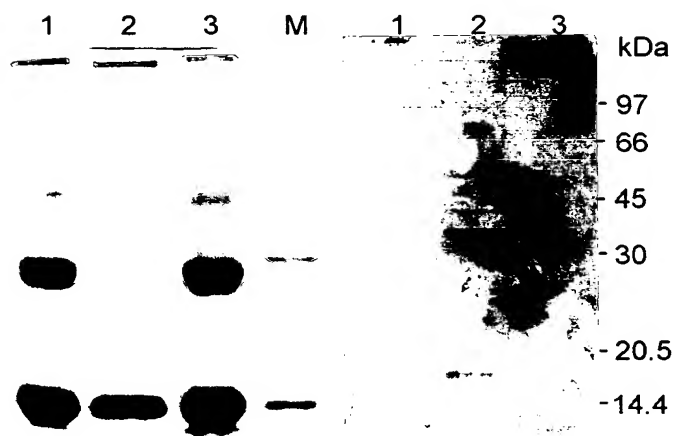


Figure 9 Western blot result demonstrating the recognition of native antigens of plasmodium strain 3D7 by antisera generated by the polyepitope chimeric gene vaccines in No. 3 library (3000× diluted)

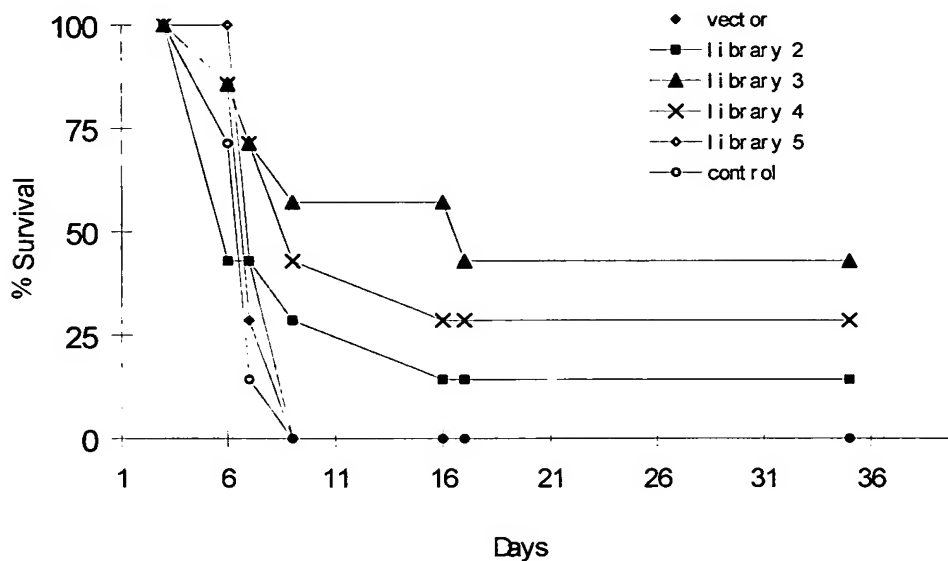


Figure 10 Cross protection by the polyepitope chimeric gene vaccines in different libraries against *Plasmodium yoelii*

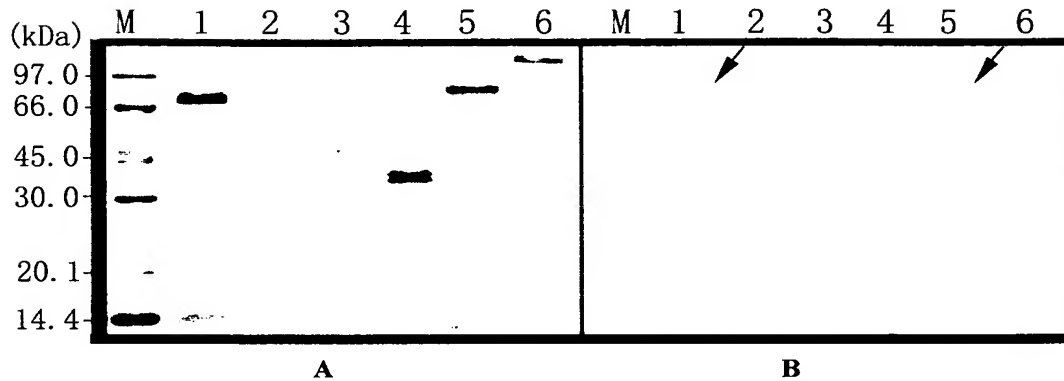


Figure 11 Western blot of the prokaryotic expression of antigen genes with high immunogenicity

A. SDS-PAGE; B. hybridization membrane

1. SP312; 2. vector; 3. SN33; 4. SN34; 5. SP352; 6. SN36.

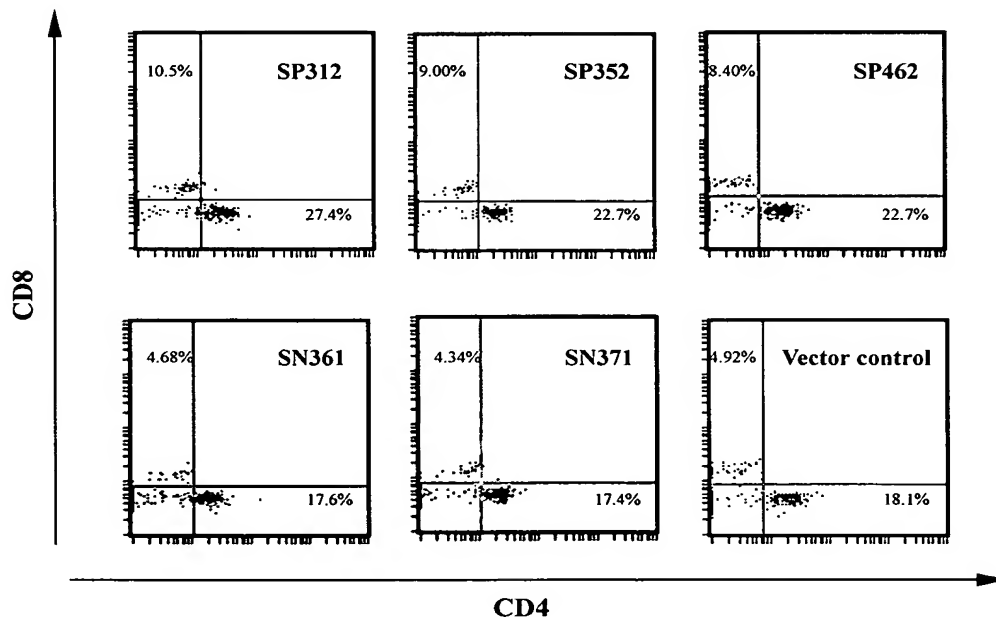


Figure 12 Detection of cytokines involved in in vivo immune response elicited by the positive (SP) and negative (SN) clones screened from the libraries